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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/602,996

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Roy T. Hashimoto

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EXAMINER

CHAWAN, SHEELA C

ART UNIT

PAPER NUMBER

2624

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DELIVERY MODE

06/15/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/602,996	Applicant(s) HASHIMOTO, ROY T.	
	Examiner Sheela C. Chawan	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-68 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-68 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/2/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 2/12/04, the information disclosure statement is being considered by the examiner.

Drawings

2. The Examiner has approved drawings filed on 6/23/03.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7, 18-24, 35 - 41 and 52-58 are rejected under 35 U.S.C. 102(e) as being anticipated by Bachelder (US. 6,993,177 B1).

As to claim 1, Bachelder discloses a method of segmenting an image having a plurality of pixels (abstract) comprising:

dividing the image into a plurality of sticks of pixels (note, gauge point could be stick pixel, fig 1, 12) wherein each stick contains at least two pixels (note, gauge entities or gauge points are defined by the user with the cursor in a graphical user interface, column 7, lines 53-64);

determining whether each stick belongs to any region from a set of region (fig 2, 22,24 and 26 29, column 8, lines 18- 27); and

classifying each stick that belongs to any region as belonging to a specific region of the set of regions (column 8, lines 29- 40).

As to claims 2, 19,36 and 53 Bachelder discloses the method of Claim 1, wherein each pixel of each stick are from a single raster line (column 7, lines 60- 63).

As to claims 3, 20, 37 and 54 Bachelder discloses the method of Claim 2, wherein each pixel of each stick are consecutive pixels of the single raster line (column 7, lines 60- 63).

As to claims 4, 21,38 and 55 Bachelder discloses the method of Claim 2, wherein a size of each stick is a multiple of a word size of a SIMD processor (fig 1, 14 20, corresponds to SIMD processor).

As to claims 5, 22, 39 and 56 Bachelder discloses the method of Claim 1, wherein determining whether each stick belongs to any region from a set of region comprises:

determining whether any pixel of a current stick belongs to any region (column 10, lines 38- 48); and

classifying the current stick as belonging to any region when any pixel of the current stick belongs to any region (column 10, lines 38- 48).

As to claims 6, 23,40 and 57 Bachelder discloses the method of Claim 5, wherein the determining whether any pixel of a current stick belongs to any region comprises comparing a binary classifier input value with a threshold level (column 9, lines 17- 26).

As to claims 7, 24,41 and 58 Bachelder discloses the method of Claim 6, wherein the binary classifier input value is a color component (column 1, lines 11- 19).

As to claim 18, see the rejection of claim 1 above.

As to claim 35, see the rejection of claim 1 above.

As to claim 52, see the rejection of claim 1 above.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8 -17, 26-34, 43-51 and 60-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bachelder (US. 6,993,177 B1), as applied to claims 1-7, 18-24, 35- 41 and 52-58 above and further in view of Bolza-Schunemann et al., (US. 5,384,859).

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Regarding claims 8, 25, 42 and 59 Bachelder discloses machine vision and more particularly to analyzing image data in machine vision system. Bachelder is silent about the method of wherein the binary classifier input value is a luminance value.

Bolza-Schunemann discloses method for quality control of printed sheets. The system comprises of :

wherein the binary classifier input value is a luminance value (column 5, lines 14-16, 20-22).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Bachelder to include wherein the binary classifier input value is a luminance value. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Bachelder by the teaching of Bolza-Schunemann in order to provide a procedure for judging the quality of a printed image by establishing nominal values for the location of images as well as ink density within images, and for establishing subjective tolerance for such nominal values (as suggested by Bolza-Schunemann at column 2, lines 33 - 37).

As to claims 9, 26, 43 and 60 Bolza-Schunemann discloses the method of Claim 6, wherein the binary classifier is a chrominance value (column 5, lines 22- 24).

As to claims 10, 27, 44 and 61 Bachelder discloses the method of Claim 5, wherein the determining whether any pixel of a current stick belongs to any region comprises:

comparing a first binary classifier input value with a first threshold level (column 5, lines 50- 54);

comparing a second binary classifier input value with a second threshold level (column 5, lines 50- 54).

As to claims 11, 28,45 and 62 Bachelder discloses the method of Claim 1, wherein the classifying each stick that belongs to any region as belonging to a specific region of the set of regions comprises:

determining whether any member of a set of previously processed sticks belong to any region (column 5, lines 54- 68);

assigning an earliest region identifier of a set of previously processed sticks to the current stick when a member of the set of previously processed sticks belongs to any region and the current stick belongs to any region (column 5, lines 54-68); and

assigning a new region identifier to the current stick when the current stick belongs to any region and no member of the set of previously processed sticks belongs to any region (column 6, lines 1-8).

As to claims 12, 29,46 and 63 Bachelder discloses the method of Claim 11, wherein the set of previously processed sticks comprises:

a preceding stick on the same raster row as the current stick (fig 1, column 5, lines 6-24);

a first stick on a preceding raster row (fig 1, column 5, lines 6-24); and

a second stick on the preceding raster row (fig 1, column 5, lines 6-24).

As to claims 13, 30, 47 and 64 Bolza-Schunemann discloses the method of Claim 12, wherein the first stick is in a same row position as the current stick and the second stick is in a following row position of the current stick (fig 1).

As to claims 14, 31, 48 and 65 Bolza-Schunemann discloses the method of Claim I, further comprising characterizing each region of the set of regions (fig 1).

As to claims 15, 32,49 and 66 Bolza-Schunemann discloses the method of Claim 14, wherein the characterizing each region of the set of regions comprises computing rectified moments for each region using a weighting table and unrectified image data (column 5, lines 6-36).

As to claims 16, 33, 50 and 67 Bolza-Schunemann discloses the method of Claim 15, wherein the weighted lookup table comprises precomputed coefficient vectors (column 5, lines 56-67).

As to claims 17, 34,51 and 68 Bolza-Schunemann discloses the method wherein the pre-computed coefficient vectors are a product of a weight factor, a first pixel coordinate raised to a non-negative power, and a second pixel coordinate raised to a non-negative power (fig 3, column 6, lines 42- 50).

Other prior art cited

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hall -Holt et al., (US. 6,754,370 B1) discloses real-time structured light range scanning of moving scenes.

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela C Chawan whose telephone number is. 571-272-7446. The examiner can normally be reached on Monday - Thursday 7.30 - 6.00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on 571-272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sheela Chawan
Patent Examiner
Group Art Unit 2624
June 4, 2007


SHEELA CHAWAN
PRIMARY EXAMINER